

# CALIFORNIA. ~~STATE~~ BOARD OF HEALTH.

## MONTHLY BULLETIN.

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No. 8.

### STATE BOARD OF HEALTH.

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### PUBLIC HEALTH ASSOCIATION.

The annual meeting of the California Public Health Association will be held at San Francisco, at the time of the meeting of the California State Medical Society—probably the day before. Watch the next issue for full account. This Association is for all health officers and others interested in sanitation, and all are urged to come. *No dues.*

### STATISTICS OF DEATHS IN 1905.

*Summary.*—Under the law for the registration of vital statistics which took effect in May, 1905, returns of varying completeness were received from all the fifty-seven counties in the State except only Humboldt. Estimated conservatively by the Census Bureau method with slight modifications, the population of the fifty-six counties in 1905 is 1,755,599. For the last six months of the year, including scattering returns for earlier months, there were reported altogether 12,236 deaths, exclusive of stillbirths not tabulated, giving an annual death-rate of only 13.9 per 1,000 population.

For Northern California, where, however, the returns were not particularly complete, the death-rate was 10.1 as compared with 14.3 for Central California and 15.2 for Southern California.

Of the minor geographic divisions into which the several counties have been grouped for convenience in tabulation, the six counties of Southern California other than Los Angeles (*i. e.*, Santa Barbara, Ventura, San Bernardino, Orange, Riverside, and San Diego) show the highest death-rate, 16.1 per 1,000 population, followed by 15.1 for San Francisco, 14.9 for the coast counties from Santa Clara and Santa Cruz to San Luis Obispo, inclusive, 14.6 for Los Angeles, and 14.2 for the interior counties from Yolo, Sacramento, and El Dorado to and including Kern. The bay counties other than San Francisco (Alameda, Contra Costa, Marin, and San Mateo), for which the death-rate is 12.4, constitute the only

division besides the coast and interior counties of Northern California with a rate below the State average of 13.9, but in all these geographic divisions there are counties for which the returns seem incomplete.

The relatively high death-rates for Southern California are due largely to deaths of newly arrived consumptives, and partly also to the "Bennington" disaster. If these exceptional deaths were excluded, the death-rate for Southern California would be reduced from 15.2 to 14.1, for Los Angeles from 14.6 to 13.8, and for the other counties from 16.1 to 14.6 per 1,000 population.

The death-rate for Northern and Central California together is 13.6, or somewhat less than the corrected rate for Southern California. The rate for the coast counties is 13.9 against 12.8 for the interior counties, the rate being higher for the coast counties mainly because of the relatively great mortality usual in a metropolis like San Francisco.

Analysis of causes of death in different localities reveals interesting contrasts between the several main and minor geographic divisions in the relative prevalence of different classes of diseases. The proportion of all deaths due to epidemic diseases is decidedly highest for the interior counties of Northern California, but is also considerably above the State average for the interior counties of Central California and for the coast counties of Northern and Central California, exclusive of San Francisco and the other bay counties. The proportions of total deaths caused by diseases of the circulatory system—heart disease and kindred complaints—are considerably above the average for the State for San Francisco and the other bay counties, particularly for the metropolis itself. In Southern California, especially in Los Angeles, the proportion of deaths from all causes due to other than epidemic general diseases, the class which includes tuberculosis, is very much higher than the average proportion for all California.

Tuberculosis caused 1,813 deaths, or 14.8 per cent of the total 12,236 reported. The corresponding per cent is 21.4 for Los Angeles, 17.0 for the other six counties of Southern California, and 15.0 for San Francisco, the per cent for every other geographic division being below the State average. The per cent was 19.7 for the seven counties south of Tehachapi, against only 13.2 for the rest of the State.

However, deaths from tuberculosis in Southern California occur largely among newly arrived consumptives, while in Northern and Central California considerable numbers of native Californians and old-time residents fall victims to the "great white plague." Thus, 25.8 per cent of the tuberculosis victims in Southern California had lived in the State less than a year, and altogether 55.7 per cent had lived here less than 10 years, the corresponding per cents for the entire State being 11.9 and 31.9 and for Northern and Central California together being 4.3 and 19.2 respectively. In fact, of all who died of tuberculosis in Southern California, 4.1 per cent had been in the State less than a month, altogether 12.7 per cent less than 3 months, and altogether 17.3 per cent less than 6 months. On the other hand, the per cent of native Californians among tuberculosis victims is 35.7 for Northern and Central California together, against 28.2 for the State as a whole and merely 13.4 for Southern California. Similarly, 35.5 per cent of all tuberculosis victims in Northern and Central California had lived in the State at least 10 years, in contrast with 30.0 for the entire State and only 19.5 for the seven counties south of Tehachapi.

*Geographic Divisions.*—For convenience in tabulation, the fifty-seven counties of California have been grouped in three main and eight minor geographic divisions, as follows, the counties in each group being arranged alphabetically for the sake of ready reference:

NORTHERN CALIFORNIA.

*Coast Counties.*

Del Norte  
Humboldt

Lake  
Mendocino

Napa  
Sonoma

Trinity

*Interior Counties.*

Butte  
Colusa  
Glenn  
Lassen

Modoc  
Nevada  
Placer  
Plumas

Shasta  
Sierra  
Siskiyou

Sutter  
Tehama  
Yuba

CENTRAL CALIFORNIA.

*San Francisco*

(City and County)

*Other Bay Counties.*

Alameda

Contra Costa

Marin

San Mateo

*Coast Counties.*

Monterey  
San Benito

San Luis Obispo

Santa Clara

Santa Cruz

*Interior Counties.*

Alpine  
Amador  
Calaveras  
El Dorado  
Fresno

Inyo  
Kern  
Kings  
Madera  
Mariposa

Merced  
Mono  
Sacramento  
San Joaquin  
Solano

Stanislaus  
Tulare  
Tuolumne  
Yolo

SOUTHERN CALIFORNIA.

*Los Angeles*

*Other Counties.*

Orange  
Riverside

San Bernardino  
San Diego

Santa Barbara

Ventura

*Death-rates.*—Returns of varying completeness were received under the new law for the registration of vital statistics from all the fifty-seven counties in the State except only Humboldt, the population of which has of course been excluded in the calculation of all death-rates. Though the present registration law took effect in May, comparatively few returns were received for May and June, as the law was not in operation generally throughout the State before July 1.

In the last six months of 1905, including scattering returns for earlier months, there were reported altogether 12,236 deaths, exclusive of still-births not tabulated. The population of California in 1905 has been estimated conservatively according to the Census Bureau method by adding to the population in 1900 five tenths of the increase between 1890 and 1900, except that for the few counties showing decreases between the last two Federal censuses the population in 1900 has been taken for 1905, and for the three principal cities arbitrary estimates have been made because of their exceptionally rapid growth. The estimate for San Francisco in 1905 is 450,000, for Los Angeles, 180,000, and for Oakland, 90,000.

The following table shows for each geographic division indicated above the population as enumerated in 1900 and as estimated for 1905,

the deaths reported for the last six months of 1905, and the annual death-rate per 1,000 population:

| Geographic Division.                   | Population.          |                     | Deaths:<br>Last Six<br>Months,<br>1905. | Annual<br>Death-rate<br>per 1,000<br>Population. |
|----------------------------------------|----------------------|---------------------|-----------------------------------------|--------------------------------------------------|
|                                        | Enumerated,<br>1900. | Estimated,<br>1905. |                                         |                                                  |
| THE STATE* -----                       | 1,457,949            | 1,755,599           | 12,236                                  | 13.9                                             |
| Northern California* -----             | 229,453              | 240,588             | 1,219                                   | 10.1                                             |
| Coast counties* -----                  | 88,204               | 92,863              | 480                                     | 10.3                                             |
| Interior counties -----                | 141,249              | 147,725             | 739                                     | 10.0                                             |
| Central California -----               | 924,285              | 1,105,090           | 7,909                                   | 14.3                                             |
| San Francisco -----                    | 342,782              | 450,000             | 3,405                                   | 15.1                                             |
| Other bay counties -----               | 176,039              | 216,127             | 1,344                                   | 12.4                                             |
| Coast counties -----                   | 124,378              | 132,371             | 984                                     | 14.9                                             |
| Interior counties -----                | 269,970              | 295,078             | 2,176                                   | 14.2                                             |
| Southern California -----              | 304,211              | 409,921             | 3,108                                   | 15.2                                             |
| Los Angeles -----                      | 170,298              | 259,000             | 1,893                                   | 14.6                                             |
| Other counties -----                   | 133,913              | 150,921             | 1,215                                   | 16.1                                             |
| Northern and Central California* ----- | 1,153,738            | 1,345,678           | 9,128                                   | 13.6                                             |
| Coast counties* -----                  | 731,403              | 891,361             | 6,213                                   | 13.9                                             |
| Interior counties -----                | 422,335              | 454,317             | 2,915                                   | 12.8                                             |

The table shows that for fifty-six counties with an estimated population of 1,755,599 the 12,236 deaths registered in the last six months of 1905 indicate an annual death-rate of only 13.9 per 1,000 population.

Of the main geographic divisions, Northern California shows the lowest death-rate, 10.1, and Southern California the highest, 15.2, as compared with 14.3 for Central California, and 13.9 for the entire State.

Of the minor divisions, both the coast and interior counties of Northern California have death-rates, 10.3 and 10.0 respectively, which are considerably below the State average. There is a similar showing besides only for the bay counties other than San Francisco (Alameda, Contra Costa, Marin, and San Mateo), with a death-rate of 12.4.

The highest death-rate, 16.1, is for Southern California, exclusive of Los Angeles (*i. e.*, Santa Barbara, Ventura, San Bernardino, Orange, Riverside, and San Diego counties). In descending order, the death-rates are 15.1 for the City and County of San Francisco, 14.9 for the coast counties of Central California, comprising Santa Clara, Santa Cruz, San Benito, Monterey, and San Luis Obispo counties, 14.6 for Los Angeles county, and 14.2 for the interior counties of Central California extending from Yolo, Sacramento, and El Dorado in the north to and including Kern in the south.

In explanation of the low death-rates for both the coast and interior counties of Northern California, it should be noted that the returns were not particularly complete for this part of the State.

Similarly, the relatively high death-rates for Los Angeles and other counties of Southern California are due largely to the deaths of recent residents from tuberculosis,† and partly, also, to the sixty-five fatalities

\* Exclusive of Humboldt County (population enumerated in 1900, 27,104, and estimated for 1905, 28,922) for which alone no vital statistics at all were reported.

† The deaths from tuberculosis of persons who had resided in the State less than a year number 158 for Southern California—106 for Los Angeles, and 52 for the other six counties.

from the "Bennington" disaster in San Diego harbor. Thus, if these exceptional deaths were excluded, the death-rate for Southern California would be reduced from 15.2 to 14.1, for Los Angeles from 14.6 to 13.8, and for the other counties from 16.1 to 14.6.

The death-rate for Northern and Central California together is 13.6, or somewhat less than the corrected rate for the seven counties of Southern California. The rate for the coast counties from Del Norte to San Luis Obispo, inclusive, is 13.9 against 12.8 for the interior counties from Siskiyou and Modoc to Kern. That the death-rate is higher for the coast than for the interior counties is due mainly to the relatively great mortality usual in a metropolis like San Francisco.

*Causes of Death.*—The following table gives the number of deaths by principal classes for the State as a whole, and also for Northern, Central, and Southern California separately. For convenience in comparison, the proportion from each class per 1,000 deaths from all causes is likewise shown:

| Class.                     | DEATHS IN LAST SIX MONTHS<br>OF 1905. |                      |               |                | PROPORTION PER 1,000 DEATHS<br>FROM ALL CAUSES. |                      |               |                |
|----------------------------|---------------------------------------|----------------------|---------------|----------------|-------------------------------------------------|----------------------|---------------|----------------|
|                            | The<br>State.                         | Geographic Division. |               |                | The<br>State                                    | Geographic Division. |               |                |
|                            |                                       | North-<br>ern.       | Cent-<br>ral. | South-<br>ern. |                                                 | North-<br>ern.       | Cent-<br>ral. | South-<br>ern. |
| ALL CAUSES -----           | 12,236                                | 1,219                | 7,909         | 3,108          | 1,000.0                                         | 1,000.0              | 1,000.0       | 1,000.0        |
| General Diseases -----     | 3,695                                 | 359                  | 2,268         | 1,068          | 302.0                                           | 294.5                | 286.8         | 343.6          |
| Epidemic diseases -----    | 685                                   | 116                  | 403           | 166            | 56.0                                            | 95.2                 | 51.0          | 53.4           |
| Other general diseases --  | 3,010                                 | 243                  | 1,865         | 902            | 246.0                                           | 199.3                | 235.8         | 290.2          |
| Nervous System -----       | 1,283                                 | 144                  | 833           | 306            | 104.8                                           | 118.1                | 105.3         | 98.5           |
| Circulatory System -----   | 1,547                                 | 131                  | 1,076         | 340            | 126.4                                           | 107.5                | 136.0         | 109.4          |
| Respiratory System -----   | 1,214                                 | 134                  | 816           | 264            | 99.2                                            | 109.9                | 103.2         | 85.0           |
| Digestive System -----     | 1,205                                 | 116                  | 804           | 285            | 98.5                                            | 95.2                 | 101.7         | 91.7           |
| Genito-Urinary System --   | 779                                   | 53                   | 505           | 221            | 63.7                                            | 43.5                 | 63.8          | 71.1           |
| Childbirth -----           | 122                                   | 8                    | 80            | 34             | 10.0                                            | 6.5                  | 10.1          | 10.9           |
| Early Infancy -----        | 410                                   | 28                   | 284           | 98             | 33.5                                            | 23.0                 | 35.9          | 31.5           |
| Old Age -----              | 323                                   | 65                   | 186           | 72             | 26.4                                            | 53.3                 | 23.5          | 23.2           |
| Violence -----             | 1,254                                 | 131                  | 776           | 347            | 102.5                                           | 107.5                | 98.1          | 111.6          |
| Ill-defined Diseases ----- | 256                                   | 41                   | 176           | 39             | 20.9                                            | 33.6                 | 22.3          | 12.6           |
| All others -----           | 148                                   | 9                    | 105           | 34             | 12.1                                            | 7.4                  | 13.3          | 10.9           |

Comparison of the proportions reveals interesting contrasts between the three main geographic divisions in the relative prevalence of different classes of diseases. Thus, in Northern California, 95.2 of every 1,000 deaths were caused by epidemic diseases, as compared with only 56.0 for the entire State. Diseases of the nervous and respiratory systems and deaths from old age are also relatively more prevalent in Northern California than in the State as a whole. In Central California, the proportion is above the general average especially for diseases of the circulatory system (136.0 per 1,000 for this division against 126.4 for the State) and also in less degree for diseases of the respiratory and digestive systems. In Southern California the proportion is particularly high for other than epidemic general diseases, the class which includes tuberculosis, the proportion being 290.2 per 1,000 for this division against only 246.0 for the State as a whole. Southern California also exceeds the State in the proportion of all deaths caused by diseases of the genito-urinary system or due to various forms of violence.

The analysis of causes of death in different localities is carried a step farther in the table below, which gives corresponding figures for the eight minor geographic divisions:

| Class.                                              | Northern California. |                    | Central California. |                     |                 |                    | Southern California. |                 |
|-----------------------------------------------------|----------------------|--------------------|---------------------|---------------------|-----------------|--------------------|----------------------|-----------------|
|                                                     | Coast Counties.      | Interior Counties. | San Francisco       | Other Bay Counties. | Coast Counties. | Interior Counties. | Los Angeles.         | Other Counties. |
| <i>Deaths in Last Six Months of 1905.</i>           |                      |                    |                     |                     |                 |                    |                      |                 |
| ALL CAUSES.....                                     | 480                  | 739                | 3,405               | 1,344               | 984             | 2,176              | 1,893                | 1,215           |
| General Diseases.....                               | 139                  | 220                | 998                 | 342                 | 289             | 639                | 702                  | 366             |
| Epidemic diseases.....                              | 55                   | 81                 | 119                 | 57                  | 71              | 156                | 101                  | 65              |
| Other general diseases.....                         | 104                  | 139                | 879                 | 285                 | 218             | 483                | 601                  | 301             |
| Nervous System.....                                 | 82                   | 62                 | 290                 | 165                 | 140             | 238                | 162                  | 144             |
| Circulatory System.....                             | 52                   | 79                 | 538                 | 184                 | 121             | 233                | 220                  | 120             |
| Respiratory System.....                             | 46                   | 88                 | 399                 | 130                 | 81              | 206                | 180                  | 84              |
| Digestive System.....                               | 42                   | 74                 | 345                 | 153                 | 96              | 210                | 182                  | 103             |
| Genito-Urinary System.....                          | 20                   | 33                 | 229                 | 97                  | 67              | 112                | 142                  | 79              |
| Childbirth.....                                     | 1                    | 7                  | 23                  | 14                  | 16              | 27                 | 18                   | 16              |
| Early Infancy.....                                  | 8                    | 20                 | 139                 | 50                  | 19              | 76                 | 69                   | 29              |
| Old Age.....                                        | 36                   | 29                 | 70                  | 25                  | 31              | 60                 | 26                   | 46              |
| Violence.....                                       | 40                   | 91                 | 285                 | 121                 | 90              | 280                | 155                  | 192             |
| Ill-defined Diseases.....                           | 11                   | 30                 | 36                  | 45                  | 23              | 72                 | 19                   | 20              |
| All others.....                                     | 3                    | 6                  | 53                  | 18                  | 11              | 23                 | 18                   | 16              |
| <i>Proportion per 1,000 Deaths from All Causes.</i> |                      |                    |                     |                     |                 |                    |                      |                 |
| ALL CAUSES.....                                     | 1,000.0              | 1,000.0            | 1,000.0             | 1,000.0             | 1,000.0         | 1,000.0            | 1,000.0              | 1,000.0         |
| General Diseases.....                               | 289.6                | 297.7              | 293.1               | 254.5               | 293.7           | 293.7              | 370.9                | 301.2           |
| Epidemic diseases.....                              | 72.9                 | 109.6              | 34.9                | 42.4                | 72.1            | 71.7               | 53.4                 | 53.5            |
| Other general diseases.....                         | 216.7                | 188.1              | 258.2               | 212.1               | 221.6           | 222.0              | 317.5                | 247.7           |
| Nervous System.....                                 | 170.8                | 83.9               | 85.2                | 122.8               | 142.3           | 109.4              | 85.6                 | 118.5           |
| Circulatory System.....                             | 108.3                | 106.9              | 158.0               | 136.9               | 123.0           | 107.1              | 116.2                | 98.8            |
| Respiratory System.....                             | 95.8                 | 119.1              | 117.2               | 96.7                | 82.3            | 94.7               | 95.1                 | 69.1            |
| Digestive System.....                               | 87.5                 | 100.1              | 101.3               | 113.8               | 97.5            | 96.5               | 96.2                 | 84.8            |
| Genito-Urinary System.....                          | 41.7                 | 44.7               | 67.3                | 72.2                | 68.1            | 51.5               | 75.0                 | 65.0            |
| Childbirth.....                                     | 2.1                  | 9.5                | 6.7                 | 10.4                | 16.3            | 12.4               | 9.5                  | 13.2            |
| Early Infancy.....                                  | 16.7                 | 27.1               | 40.8                | 37.2                | 19.3            | 34.9               | 36.4                 | 23.9            |
| Old Age.....                                        | 75.0                 | 39.2               | 20.5                | 18.6                | 31.5            | 27.5               | 13.7                 | 37.8            |
| Violence.....                                       | 83.3                 | 123.1              | 83.7                | 90.0                | 91.4            | 128.7              | 81.9                 | 158.0           |
| Ill-defined Diseases.....                           | 22.9                 | 40.6               | 10.6                | 33.5                | 23.4            | 33.1               | 10.0                 | 16.5            |
| All others.....                                     | 6.3                  | 8.1                | 15.6                | 13.4                | 11.2            | 10.5               | 9.5                  | 13.2            |

Study of this and the preceding table brings out notable points about causes of death in the eight minor geographic divisions, as follows:

In comparison with the average proportions for the State as a whole, the proportions for the coast counties of Northern California are particularly high in the case of diseases of the nervous system and deaths from old age, the proportions per 1,000 total deaths being respectively 170.8 and 75.0 for this group of counties against general averages of 104.8 and 26.4 for the State. It should be remembered, however, that many of the deaths reported for this geographic division occurred at the Mendocino and Napa State Hospitals. In this division the proportion of all deaths caused by epidemic diseases is also considerable, being 72.9 against 56.0 for California as a whole.

For the interior counties of Northern California the proportions are particularly high for epidemic diseases (the proportion per 1,000 deaths being 109.6 as compared with 56.0 for the State), for diseases of the respiratory system (119.1 for this division against an average proportion of 99.2 for all California), and for violence (123.1 for this division against 102.5 for the entire State).

San Francisco exceeds the State especially in the proportion of all deaths caused by diseases of the circulatory system (158.0 against 126.4) and of the respiratory system (117.2 against 99.2 per 1,000 deaths).

In the other bay counties (Alameda, Contra Costa, Marin, and San Mateo) the proportions are above the general average particularly for diseases of the nervous system (122.8 against 104.8), of the digestive system (113.8 against 98.5), and also of the circulatory system (136.9 against 126.4).

The coast counties of Central California, from Santa Clara and Santa Cruz to San Luis Obispo inclusive, surpass the State especially in the proportions of all deaths caused by epidemic diseases (72.1 in contrast with 56.0) and by diseases of the nervous system (142.3 in contrast with 104.8 for the State).

The interior counties of Central California from Yolo, Sacramento, and El Dorado to and including Kern, also show a considerable proportion for epidemic diseases, 71.7 per 1,000 deaths from all causes, and exceed besides in deaths by violence, the proportion for this division being 128.7 against 102.5 for the State as a whole.

Los Angeles County surpasses the State particularly in the proportion for other than epidemic general diseases, the class which includes tuberculosis, the proportion per 1,000 total deaths being 317.5 for this county against 246.0 for California as a whole. The proportion for diseases of the genito-urinary system in Los Angeles, 75.0, is also somewhat above the average of 63.7 for the entire State.

In the remaining six counties of Southern California, also, the proportion for other than epidemic diseases is relatively high, 247.7 per 1,000 total deaths, as is besides the proportion for violence (158.0 against 102.5 for the State). However, one third (65 of 192) of the deaths from violence in this geographic division resulted from the explosion on the U. S. S. "Bennington" in San Diego harbor.

*Tuberculosis.*—The following table shows the number and per cent of total deaths caused by tuberculosis in each main and minor geographic division:

| Geographic Division.                  | Total Deaths. | Tuber-<br>culosis. | All<br>Other<br>Causes. | Per Cent From—     |                         |
|---------------------------------------|---------------|--------------------|-------------------------|--------------------|-------------------------|
|                                       |               |                    |                         | Tuber-<br>culosis. | All<br>Other<br>Causes. |
| THE STATE .....                       | 12,236        | 1,813              | 10,420                  | 14.8               | 85.2                    |
| Northern California .....             | 1,219         | 138                | 1,081                   | 11.3               | 88.7                    |
| Coast counties .....                  | 480           | 69                 | 411                     | 14.4               | 65.6                    |
| Interior counties .....               | 739           | 69                 | 670                     | 9.3                | 90.7                    |
| Central California .....              | 7,909         | 1,063              | 6,846                   | 13.4               | 86.6                    |
| San Francisco .....                   | 3,405         | 511                | 2,894                   | 15.0               | 85.0                    |
| Other bay counties .....              | 1,344         | 149                | 1,195                   | 11.1               | 88.9                    |
| Coast counties .....                  | 984           | 135                | 849                     | 13.7               | 86.3                    |
| Interior counties .....               | 2,176         | 268                | 1,908                   | 12.3               | 87.7                    |
| Southern California .....             | 3,108         | 612                | 2,496                   | 19.7               | 80.3                    |
| Los Angeles .....                     | 1,893         | 405                | 1,488                   | 21.4               | 78.6                    |
| Other counties .....                  | 1,215         | 207                | 1,008                   | 17.0               | 83.0                    |
| Northern and Central California ..... | 9,128         | 1,201              | 7,927                   | 13.2               | 86.8                    |
| Coast counties .....                  | 6,213         | 864                | 5,349                   | 13.9               | 86.1                    |
| Interior counties .....               | 2,915         | 337                | 2,578                   | 11.6               | 88.4                    |

In the State there were 1,813 deaths from tuberculosis, or 14.8 per cent of the total 12,236 reported. The per cent of all deaths due to

tuberculosis is highest, 21.4, for Los Angeles; next 17.0, for the other six counties of Southern California; and next, 15.0, for San Francisco. The per cent is below the average for the State in both divisions of Northern California and in the three divisions of Central California outside the metropolis. The per cent was 19.7 for the seven counties of Southern California against only 13.2 for Northern and Central California.

It should be noted, however, that deaths of newly arrived consumptives are much more numerous in Southern California than in the rest of the State. This appears clearly from the following table showing the length of residence in California of those who died of tuberculosis in the last six months of 1905:

| Geographic Division.                 | Total. | Length of Residence. |                  |                         |       |               |
|--------------------------------------|--------|----------------------|------------------|-------------------------|-------|---------------|
|                                      |        | Under<br>1 Year.     | 1 to 9<br>Years. | 10 Years<br>and<br>Over | Life. | Un-<br>known. |
| <i>Numbers.</i>                      |        |                      |                  |                         |       |               |
| THE STATE-----                       | 1,813  | 210                  | 362              | 545                     | 511   | 185           |
| Northern California-----             | 138    | 6                    | 16               | 47                      | 52    | 17            |
| Coast counties-----                  | 69     | 3                    | 6                | 22                      | 26    | 12            |
| Interior counties-----               | 69     | 3                    | 10               | 25                      | 26    | 5             |
| Central California-----              | 1,063  | 46                   | 163              | 379                     | 377   | 98            |
| San Francisco-----                   | 511    | 16                   | 68               | 194                     | 180   | 53            |
| Other bay counties-----              | 149    | 5                    | 22               | 55                      | 60    | 7             |
| Coast counties-----                  | 135    | 9                    | 22               | 35                      | 61    | 8             |
| Interior counties-----               | 268    | 16                   | 51               | 95                      | 76    | 30            |
| Southern California-----             | 612    | 158                  | 183              | 119                     | 82    | 70            |
| Los Angeles-----                     | 405    | 106                  | 130              | 75                      | 41    | 53            |
| Other counties-----                  | 207    | 52                   | 53               | 44                      | 41    | 17            |
| Northern and Central California----- | 1,201  | 52                   | 179              | 426                     | 429   | 115           |
| Coast counties-----                  | 864    | 33                   | 118              | 306                     | 327   | 80            |
| Interior counties-----               | 337    | 19                   | 61               | 120                     | 102   | 35            |
| <i>Per cents.</i>                    |        |                      |                  |                         |       |               |
| THE STATE-----                       | 100.0  | 11.6                 | 20.0             | 30.0                    | 28.2  | 10.2          |
| Northern California-----             | 100.0  | 4.3                  | 11.6             | 34.1                    | 37.7  | 12.3          |
| Coast counties-----                  | 100.0  | 4.3                  | 8.7              | 31.9                    | 37.7  | 17.4          |
| Interior counties-----               | 100.0  | 4.3                  | 14.5             | 36.2                    | 37.7  | 7.3           |
| Central California-----              | 100.0  | 4.3                  | 15.3             | 35.7                    | 35.5  | 9.2           |
| San Francisco-----                   | 100.0  | 3.1                  | 13.3             | 38.0                    | 35.2  | 10.4          |
| Other bay counties-----              | 100.0  | 3.3                  | 14.8             | 36.9                    | 40.3  | 4.7           |
| Coast counties-----                  | 100.0  | 6.7                  | 16.3             | 25.9                    | 45.2  | 5.9           |
| Interior counties-----               | 100.0  | 6.0                  | 19.0             | 35.4                    | 28.4  | 11.2          |
| Southern California-----             | 100.0  | 25.8                 | 29.9             | 19.5                    | 13.4  | 11.4          |
| Los Angeles-----                     | 100.0  | 26.2                 | 32.1             | 18.5                    | 10.1  | 13.1          |
| Other counties-----                  | 100.0  | 25.1                 | 25.6             | 21.3                    | 19.8  | 8.2           |
| Northern and Central California----- | 100.0  | 4.3                  | 14.9             | 35.5                    | 35.7  | 9.6           |
| Coast counties-----                  | 100.0  | 3.8                  | 13.7             | 35.4                    | 37.8  | 9.3           |
| Interior counties-----               | 100.0  | 5.6                  | 18.1             | 35.6                    | 30.3  | 10.4          |

The table shows that 25.8 per cent of those who died of tuberculosis in Southern California had lived in the State less than a year, the per cent being 26.2 for Los Angeles and 25.1 for the other six counties. The corresponding figure for Northern and Central California together is only 4.3, and that for the entire State is 11.6 per cent.

In fact, many of the tuberculosis victims in Southern California had been in the State only a few months. The length of residence in months

of those who died of tuberculosis in Los Angeles and the other counties of Southern California after having been in the State less than a year is shown in the table which follows:

| Geographic Division.      | Total<br>Under<br>1 Year. | Length of Residence. |                   |                   |                    |
|---------------------------|---------------------------|----------------------|-------------------|-------------------|--------------------|
|                           |                           | Under 1<br>month.    | 1 or 2<br>months. | 3 to 5<br>months. | 6 to 11<br>months. |
| <i>Numbers.</i>           |                           |                      |                   |                   |                    |
| SOUTHERN CALIFORNIA ----- | 158                       | 25                   | 53                | 28                | 52                 |
| Los Angeles -----         | 106                       | 16                   | 30                | 22                | 38                 |
| Other counties -----      | 52                        | 9                    | 23                | 6                 | 14                 |
| <i>Per cents.</i>         |                           |                      |                   |                   |                    |
| SOUTHERN CALIFORNIA ----- | 25.8                      | 4.1                  | 8.6               | 4.6               | 8.5                |
| Los Angeles -----         | 26.2                      | 4.0                  | 7.4               | 5.4               | 9.4                |
| Other counties -----      | 25.1                      | 4.3                  | 11.1              | 2.9               | 6.8                |

This table shows that of all who died of tuberculosis in Southern California 4.1 per cent had been in the State less than a month, altogether 12.7 per cent less than 3 months, and altogether 17.3 per cent less than 6 months. In Los Angeles 16.8 per cent, and in the other counties 18.3 per cent, of the total victims of tuberculosis had lived in California less than half a year.

Moreover, while in the entire State 31.6, and in Northern and Central California together only 19.2 per cent, of all tuberculosis victims had lived here less than 10 years, in Southern California 55.7 per cent had lived in the State this length of time, the corresponding per cent being 58.3 for Los Angeles, and 50.7 for the other six counties.

Native Californians form a considerable proportion of all tuberculosis victims in Northern and Central California. The per cent of native Californians among all tuberculosis victims is 37.7 for Northern California and 35.5 for Central California, or 35.7 for both divisions together, against 28.2 for the entire State and only 13.4 for Southern California. Similarly, deaths of old-time residents from tuberculosis are relatively more numerous in Northern and Central California than south of Tehachapi. Thus, the per cent of all tuberculosis victims who had lived here at least 10 years is 35.7 for Central California, 34.1 for Northern California, and 35.5 for both divisions together, in contrast with 30.0 for the State as a whole, and only 19.5 for Southern California.

#### VITAL STATISTICS FOR JANUARY, 1906.

*Summary.*—The vital statistics reported for January, 1906, are as follows: Living births, 1,902; deaths, exclusive of stillbirths, 2,670; and marriages, 1,532, or 3,064 persons married. The population of the State, except Humboldt County, for which no returns have yet been received, is 1,853,561 in 1906, as estimated by the Census Bureau method with certain modifications heretofore explained. On the basis of this population, the vital statistics reported for January give the following annual rates: Living births, 12.3; deaths, 17.4; and marriages, 9.9, or 19.8 persons married, per 1,000 population.

Tuberculosis, as ever, was the principal cause of death, with pneumonia leading heart disease for second place, as usual in the winter months.

*Causes of Death.*—The following table gives the number of deaths, by principal classes, reported for California in January. For convenience in comparison, the proportion from each class per 1,000 deaths from all causes is likewise shown:

| Class.                       | Number. | Proportion. |
|------------------------------|---------|-------------|
| ALL CAUSES .....             | 2,670   | 1,000.0     |
| General Diseases .....       | 773     | 289.5       |
| Epidemic diseases .....      | 156     | 58.4        |
| Other general diseases ..... | 617     | 231.1       |
| Nervous System .....         | 255     | 95.5        |
| Circulatory System .....     | 362     | 135.6       |
| Respiratory System .....     | 468     | 175.3       |
| Digestive System .....       | 188     | 70.4        |
| Genito-Urinary System .....  | 176     | 65.9        |
| Violence .....               | 190     | 71.2        |
| All others .....             | 258     | 96.6        |

The proportions are highest for other than epidemic general diseases, 231.1, diseases of the respiratory system, 175.3, and diseases of the circulatory system, 135.6, per 1,000 total deaths. The specific causes of death most prominent in these leading classes are respectively tuberculosis, pneumonia, and heart disease.